

CLAIMS

What is claimed is:

Claim 1. A dynamic storage compartment adapted for insertion within and upon an interior panel of a vehicle door comprising:

a back panel member having a back surface, opposite sides, a top and a bottom, wherein said sides, top and bottom extend substantially perpendicular to said back surface;

a front panel member having a front surface, opposite sides, a top and a bottom, said front surface having an aperture therethrough;

a center member being constructed and arranged for mechanical engagement within and upon a surface of an inner panel of a vehicle door, said center member having opposite sides, a top and a bottom for connecting peripheral portions of said front and said back panel members so that said panel members face each other to form front and back inner boundaries of an interior portion of said storage compartment, wherein said sides, top and bottom of said back member are constructed and arranged to telescope inwardly and outwardly within said center member, wherein said storage compartment is at least partially recessed within an interior portion of said vehicle door; and

whereby attachment of said storage compartment to said

1 vehicle door provides enhanced interior storage for a vehicle.

2
3 Claim 2. The storage compartment as set forth in claim 1,
4 wherein said front panel member includes a covering means
5 movable between a first open position and a second closed
6 position, wherein said covering means is juxtaposed to said
7 aperture while in said closed position.

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9 Claim 3. The storage compartment as set forth in claim 2,
10 wherein said covering means includes a flexible flap, said
11 flexible flap being connected to said front member for flexible
12 movement between said open and said closed positions.

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14 Claim 4. The storage compartment as set forth in claim 2,
15 wherein said covering means includes a rigid plate, said rigid
16 plate being connected to said front member for pivotal movement
17 between said open and said closed positions.

18
19 Claim 5. The storage compartment as set forth in claim 2,
20 wherein said covering means includes a plurality of narrow
21 elongated rigid elements flexibly connected in an adjacent
22 relationship, wherein at least one of said narrow elongated
23 rigid elements is flexibly connected to said front panel
24 member.

1 Claim 6. The storage compartment as set forth in claim 5,
2 wherein said elongated rigid elements are constructed and
3 arranged to form a plurality of accordion-like folds, wherein
4 terminal a terminal fold is connected to said front panel
5 member.

6

7 Claim 7. The storage compartment as set forth in claim 5,
8 wherein said elongated rigid elements are constructed and
9 arranged for winding around an axle in a series of concentric
10 loops.

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12 Claim 8. The storage compartment as set forth in claim 7,
13 wherein said axle includes a spring retraction mechanism for
14 retraction and deployment of said covering means.

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16 Claim 9. The storage compartment as set forth in claim 2,
17 wherein said covering means includes a flexible sheet element,
18 said flexible sheet element being flexibly connected to said
19 front panel member.

20

21 Claim 10. The storage compartment as set forth in claim 9,
22 wherein said flexible sheet element includes a plurality of
23 accordion-like folds.

24

25 Claim 11. The storage compartment as set forth in claim 9,

1 wherein said flexible sheet element is constructed and arranged
2 for winding around an axle in a series of concentric loops.

3
4 Claim 12. The storage compartment as set forth in claim
5 11, wherein said axle includes a spring retraction mechanism
6 for retraction and deployment of said covering means.

7
8 Claim 13. The storage compartment as set forth in claim 1,
9 wherein back panel member includes a means for pressing said
10 back panel member outwardly of said center member and into said
11 door cavity when a window in said vehicle door is moved in an
12 upward direction.

13
14 Claim 14. The storage compartment as set forth in claim
15 13, wherein said means for pressing said back panel member
16 outwardly includes at least one spring member.

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18 Claim 15. The storage compartment as set forth in claim 1,
19 wherein said vehicle door window cooperates with said back
20 panel member for pressing said back member into said center
21 member during downward movement of said vehicle door window.

22
23 Claim 16. The storage compartment as set forth in claim
24 15, wherein said back member includes a ramping surface
25 extending between said top and said back surfaces, wherein said

1 ramping surface is constructed and arranged to cooperate with
2 a lower portion of said vehicle door window for pressing said
3 back member into said center member during downward movement of
4 said vehicle door window.

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6 Claim 17. The storage compartment as set forth in claim 1,
7 wherein said sides, top and bottom extend substantially
8 perpendicular to said front surface, wherein said front panel
9 member is constructed and arranged to telescope inwardly and
10 outwardly within said center member.

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12 Claim 18. A storage compartment adapted for insertion
13 within and upon an interior panel of a vehicle door comprising:

14 a back panel member having a back surface, opposite sides,
15 a top and a bottom, wherein said sides, top and bottom extend
16 substantially perpendicular to said back surface;

17 a front panel member having a front surface, opposite
18 sides, a top and a bottom, said front surface having an
19 aperture therethrough;

20 a center member being constructed and arranged for
21 mechanical engagement within and upon a surface of an inner
22 panel of a vehicle door, said center member having opposite
23 sides, a top and a bottom for connecting peripheral portions of
24 said front and said back panel members so that said panel
25 members face each other to form front and back inner boundaries

1 of an interior portion of said storage compartment, wherein
2 said sides, top and bottom of said back member are constructed
3 and arranged to telescope inwardly and outwardly within said
4 center member, wherein said storage compartment is at least
5 partially recessed within an interior portion of said vehicle
6 door;

7 a flexible covering element secured to said front panel
8 member and movable between a first open position and a second
9 closed position, wherein said covering element is juxtaposed to
10 said aperture while in said closed position;

11 wherein said vehicle door includes a window, wherein said
12 window cooperates with said back panel member for pressing said
13 back member into said center member during downward movement of
14 said vehicle door window, wherein an item stored in said
15 interior portion of said storage compartment may flex said
16 front panel member into an interior portion of said vehicle.

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18 Claim 19. A dynamic storage compartment adapted for
19 insertion within and upon an interior panel of a vehicle door
20 comprising:

21 a back panel member having a back surface, opposite sides,
22 a top and a bottom, wherein said sides, top and bottom extend
23 substantially perpendicular to said back surface;

24 a front panel member having a front surface including a
25 plurality of pleated folds, opposite sides, a top and a hinged

1 bottom, said top surface having an aperture therethrough;

2 a center member being constructed and arranged for
3 mechanical engagement within and upon a surface of an inner
4 panel of a vehicle door, said center member having opposite
5 sides, a top and a bottom for connecting peripheral portions of
6 said front and said back panel members so that said panel
7 members face each other to form front and back inner boundaries
8 of an interior portion of said storage compartment, wherein
9 said sides, top and bottom of said back member are constructed
10 and arranged to telescope inwardly and outwardly within said
11 center member, wherein said storage compartment is at least
12 partially recessed within an interior portion of said vehicle
13 door;

14 a lid member hingedly secured to said front panel member
15 and movable between a first open position and a second closed
16 position, wherein said covering element is juxtaposed to said
17 aperture while in said closed position, wherein said lid member
18 includes a keyhole aperture, said keyhole aperture constructed
19 and arranged to cooperate with said front panel member in a
20 latched position and an unlatched position, wherein said latched
21 position holds said front panel member against said door panel
22 and said unlatched position allows said front panel member to
23 expand inwardly into an interior area within said vehicle,
24 thereby increasing storage space within said storage
25 compartment;

1 wherein said vehicle door includes a window, wherein said
2 window cooperates with said back panel member for pressing said
3 back member into said center member during downward movement of
4 said vehicle door window, wherein an item stored in said
5 interior portion of said storage compartment may flex said
6 front panel member into an interior portion of said vehicle
7 when said keyhole aperture is in said unlatched position.

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9 Claim 20. A dynamic storage compartment adapted for
10 insertion within and upon an interior panel of a vehicle door
11 comprising:

12 a back panel member having a back surface, opposite sides,
13 a top and a bottom, wherein said sides, top and bottom extend
14 substantially perpendicular to said back surface;

15 a front panel member having a front surface, opposite
16 sides, a top and a bottom, said front surface having an
17 aperture therethrough, said sides, top and bottom extending
18 substantially perpendicular to said front surface, wherein said
19 front panel member is constructed and arranged to telescope
20 inwardly and outwardly within said center member;

21 a center member being constructed and arranged for
22 mechanical engagement within and upon a surface of an inner
23 panel of a vehicle door, said center member having opposite
24 sides, a top and a bottom for connecting peripheral portions of
25 said front and said back panel members so that said panel

1 members face each other to form front and back inner boundaries
2 of an interior portion of said storage compartment, wherein
3 said sides, top and bottom of said back panel member and said
4 front panel member are constructed and arranged to telescope
5 inwardly and outwardly within said center member, wherein said
6 storage compartment is at least partially recessed within an
7 interior portion of said vehicle door;

8 a rigid covering element secured to said front panel
9 member and movable between a first open position and a second
10 closed position, wherein said covering element is juxtaposed to
11 said aperture while in said closed position;

12 wherein said vehicle door includes a window, wherein said
13 window cooperates with said back panel member for pressing said
14 back member into said center member during downward movement of
15 said vehicle door window, wherein said back panel member
16 cooperates with said front panel member to press said press
17 said front panel member into an interior portion of said
18 vehicle.